University of Guam Research Station Web App User Guide

The UOG Research Station Web App can be visited at the following internet addresses and at the Western Pacific Tropical Research Center website:

Ija:
https://govguamgis.maps.arcgis.com/apps/webappviewer/index.html?id=8961cad327914c7cbf6de1aca8ffccee

Inarajan:
https://govguamgis.maps.arcgis.com/apps/webappviewer/index.html?id=6f1e7d9250f245eb90c3ab9f28ec7e3a

Yigo:
https://govguamgis.maps.arcgis.com/apps/webappviewer/index.html?id=fe72738e2afb4f54a09680edc10e4645

The web app is a tool for visualizing and exploring UOG's WPTRC research stations and offers much of the benefits of using GIS maps without the difficulties associated with using the full GIS software.

This guide outlines most of what the user can do with the app and includes screen shots of the app to demonstrate the functions being discussed. If you cannot see the screen shots well, try clicking on 'View' and 'Zoom' in the Word document and then click the dot next to 200%.

With the web app you can:

1) zoom in and out/ return to the default map view after zooming

2) change the base map

3) turn layers on and off

4) click on a feature to see its data/information

5) open the attribute table to view all available data columns

6) zoom to layers and/or features

7) change the transparency and visibility range of layers.

The web app shows a 'Streets' map image of each station by default, but as part of ArcGIS online, it has full functionality so in the search bar where it says, 'Find address or place', you can enter an address or place name, and it will take you to a street map image of that place.

Whether you are looking at one of the research stations or somewhere else, you may want to zoom in to see more detail.

Zoom In/Zoom Out/Default Extent - To the left of the search bar there are little boxes with a plus and a minus sign.
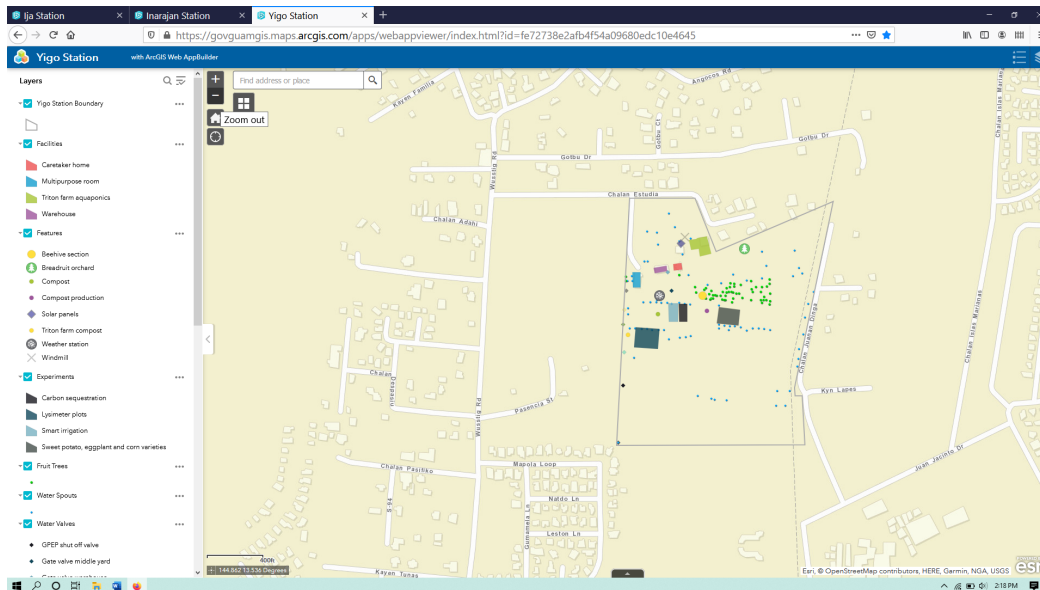
If you click on the plus sign, you will zoom in by a factor of two, and if you click on the minus sign you will zoom out likewise. If you are using a computer with a mouse that has a wheel, pushing the wheel forward will zoom in and pulling it back will zoom out.

If you get lost or just want to go back to the original extent, click on the icon with a house symbol in it below the minus sign box called 'Default extent'.

The icon with the compass looking symbol below the home button is for finding where you are, wherever that is, and if you want to use it your device has to be set to allow your location access. If it is and you click on the icon, you will be whisked to a street map image of wherever you are using your device.

Changing the base map – Depending on your interests, you may want to change the base map to see a satellite image, for example. Directly below the search bar in the upper left corner of the picture window of the web app, there is a small box with a window icon. If you hover your mouse pointer over it, it should say 'Basemap Gallery'.
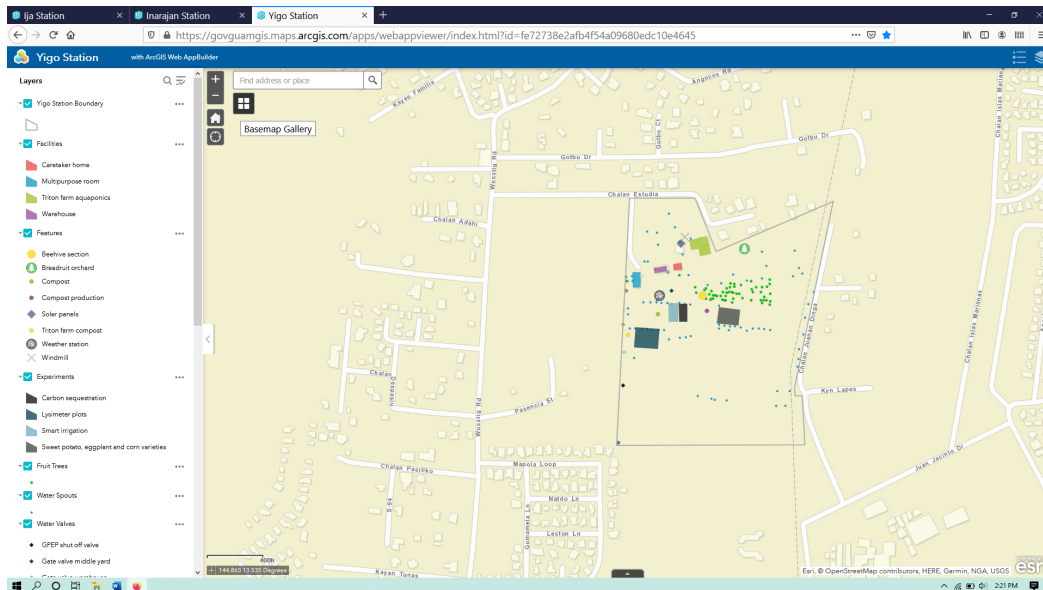
If you click on the icon, a small window will open with a couple dozen base map options to choose from.
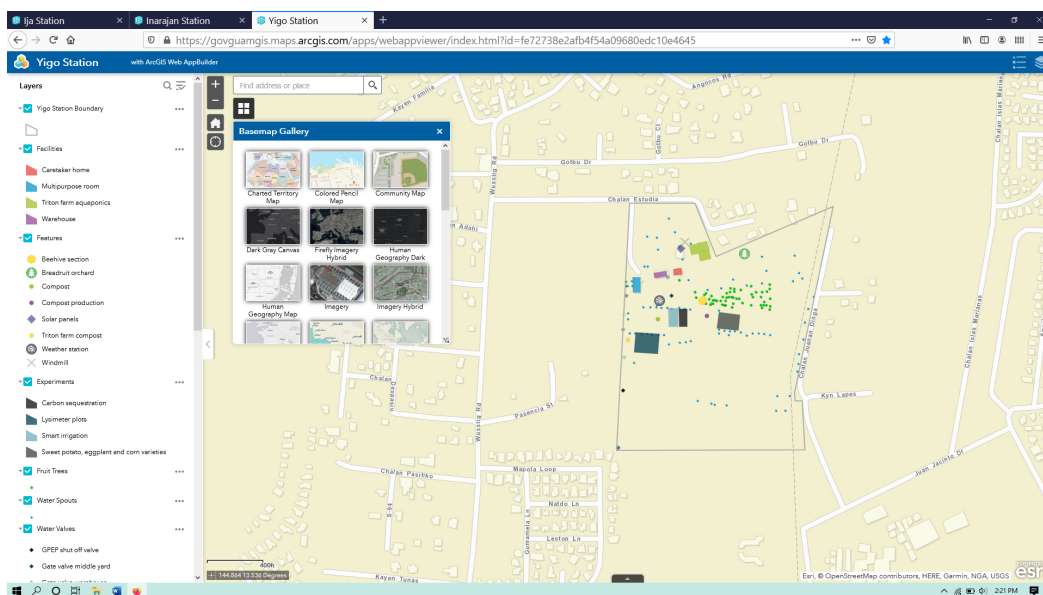
The options may change sometimes, but you can try them all, by clicking on them. If you want to see a satellite image of the station, you would select 'Imagery'.
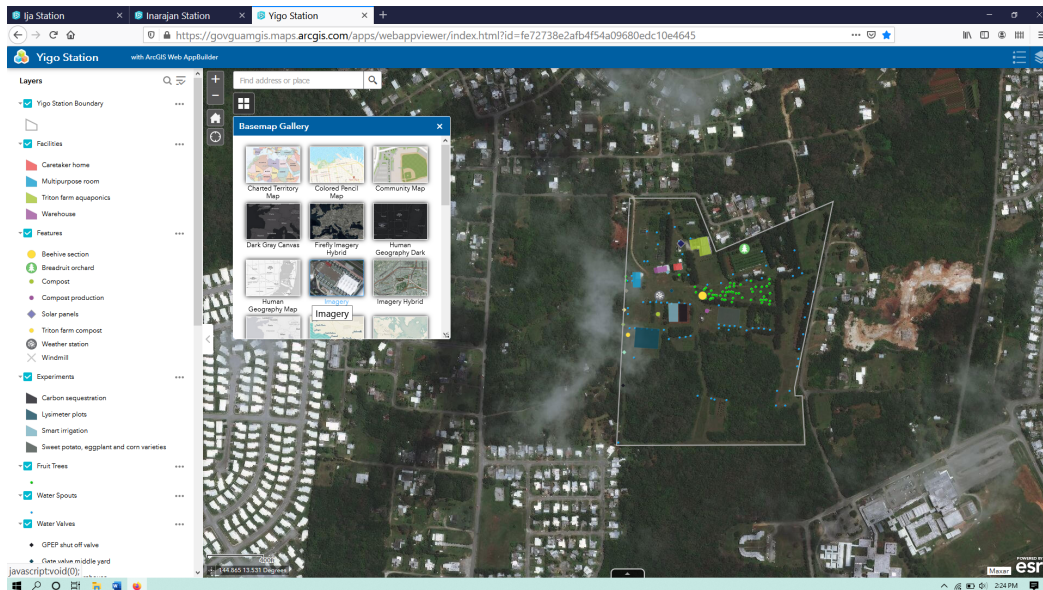
If you want to go back to the street view of the island, click on the basemap titled 'Streets'.

Notice that regardless of which basemap is selected, there is a vertical tab open on the left hand side of the screen with a list of the layers available to view in the app. There are blue check boxes next to some of the layers and empty white boxes next to others. If you click on a box with a checkmark, the mark and the layer will disappear, and if you click on a empty box, the mark and layer will appear. Zoom in once and click on the Yigo Station Boundary layer to make it disappear.
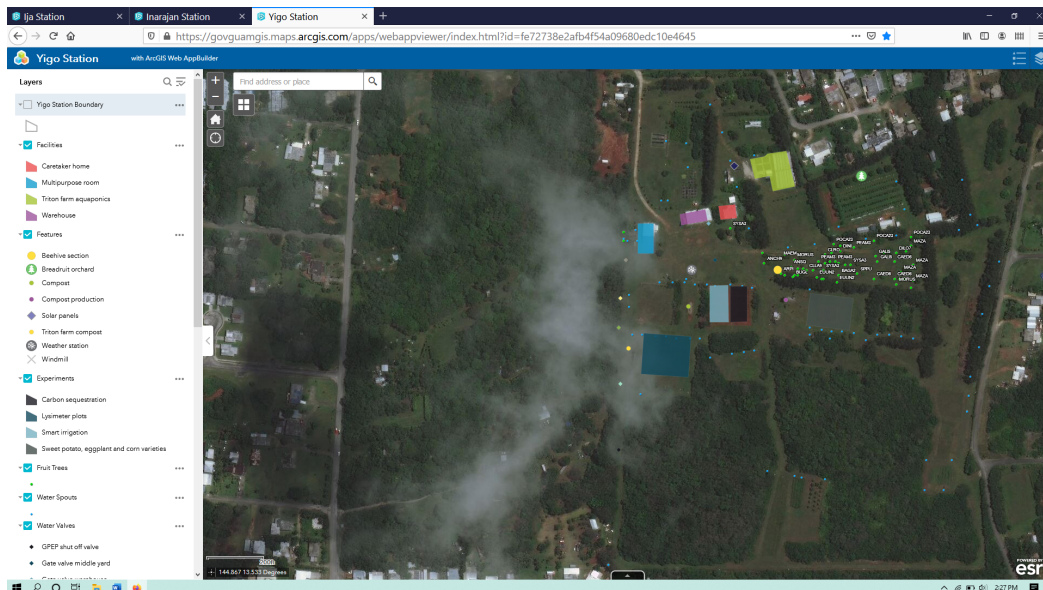

Perhaps you want to see vegetation, soils, or contours on the map. Click once on all of the empty white check boxes to turn them on, including the Yigo Station Boundary layer to turn it back on.
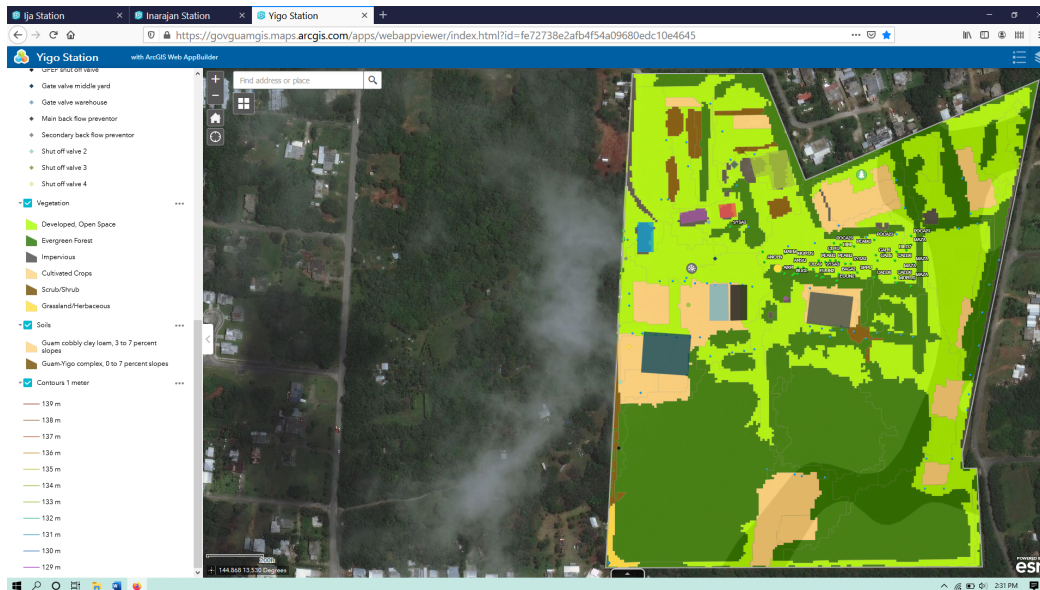
The map should look something like this. The vegetation, soils, and contours only show up within the station boundaries.

Click on a Feature to See Data/Information - You can click on any feature within the station boundary, and a small window will appear with the data/information associated with that map feature. Note that if multiple layers are turned on and overlap at the place where you click, more than one feature will show up in the box, and you can use the arrow(s) at the top to switch between them.

Zoom to from Information Box - The 'Zoom to' option at the bottom of the box will recenter the image around the clicked feature, and how much the image zooms in depends on the size of the feature. Perhaps you are interested in what the vegetation type is at the southern end of Yigo station. Try clicking within the dark green area in the lower left corner somewhere.
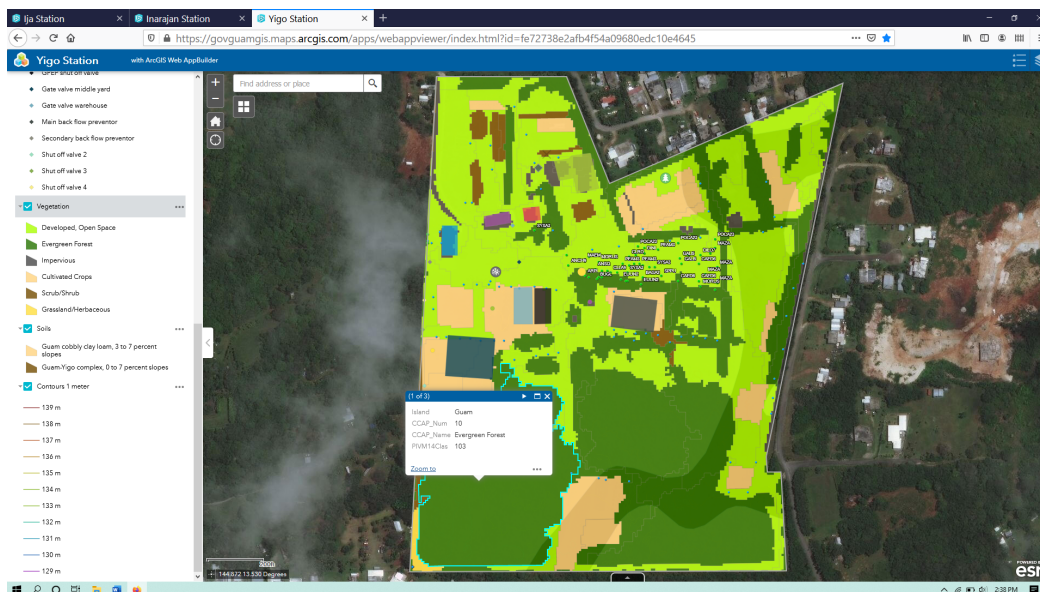
In this case, there are three features that overlap at this location, and the data shown in the window is usually in the same order as the drawing order of the layers. There is evergreen forest at this location, with Guam cobbly clay loam soil. How do you know that? You can see the vegetation type in the data window, and then click on the forward arrow at the top of the data box.
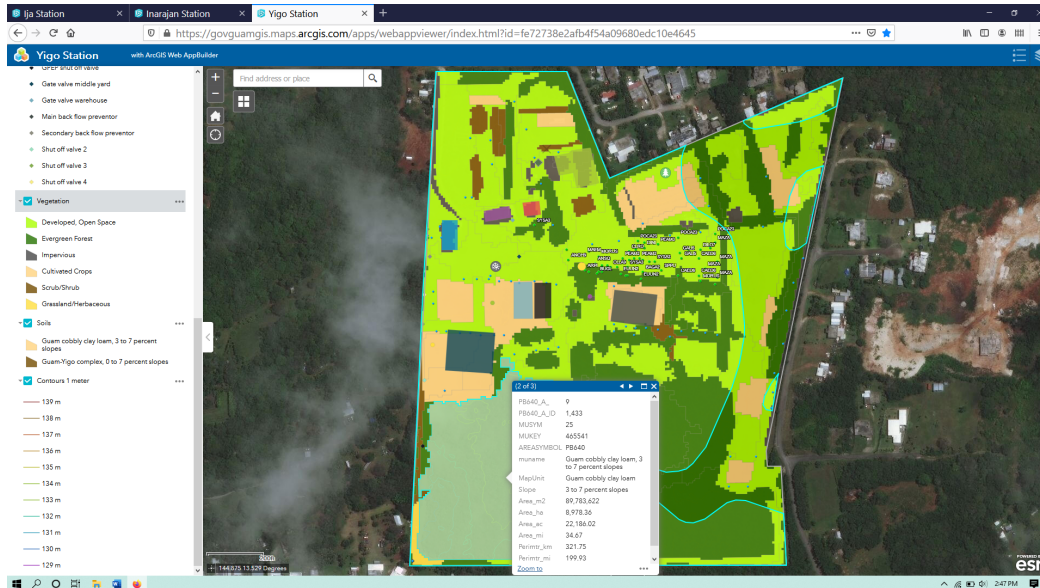
Here you can see the soil type and all of the other information for that location in the soil layer. Close the data window by clicking the x in the upper right corner.

Open the Attribute Table/View all Data/Information - Perhaps you would like to see the entire data table, called the attribute table for a layer. Click on the small button called 'Open Attribute Table' in the bottom center of the screen, and the attribute table will scroll into view.
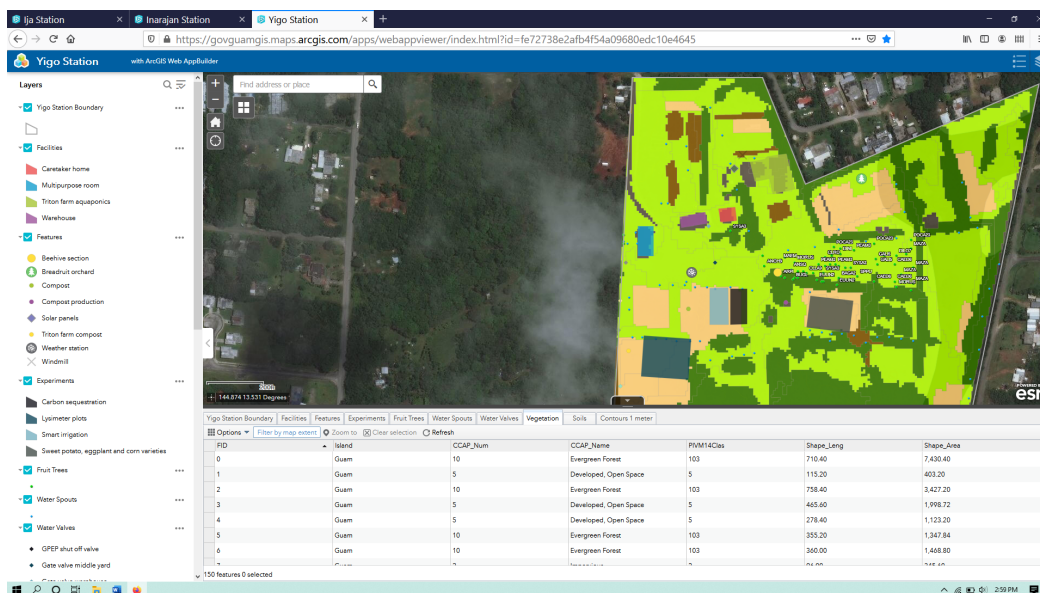

Notice at the top of the table there are little tabs for all of the layers available to view. If you click on a tab, then you will see the data for that layer. Each table has different information stored depending on

the layer. If a layer is turned off, you would not normally see it available to view in the attribute table. You can still open and view the attribute table of a layer that is turned off, if you click on the little three dots next to the layer in the layer tab and select 'View in attribute table'.

Columns can be sorted by ascending or descending values, or show summary statistics, when applicable.

Zoom to From Attribute Table - Perhaps you see something interesting in the attribute table and would like to know where it is on the map. Click on the 'Features' tab at the top of the table and see if you can find the row with 'Breadfruit orchard' in the 'Text' column.
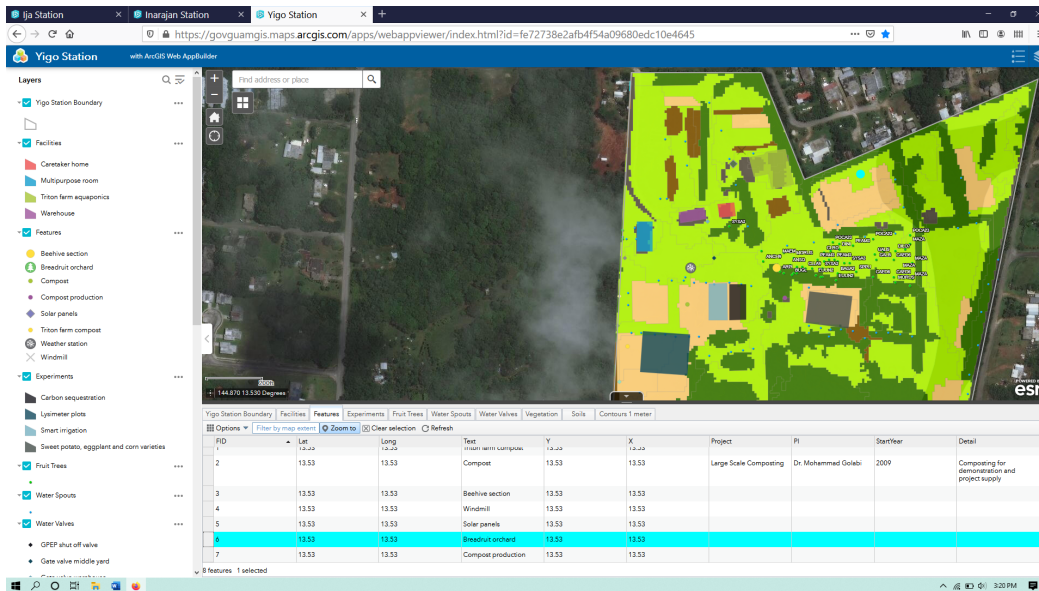
You can select a feature (point or polygon) by clicking on the empty gray box in the leftmost column next to the row containing the data, and in the table menu options click 'Zoom to.' You know that a feature is selected when it is highlighted bright blue. If you want to deselect the feature you can click on 'Clear selection' in the table menu.
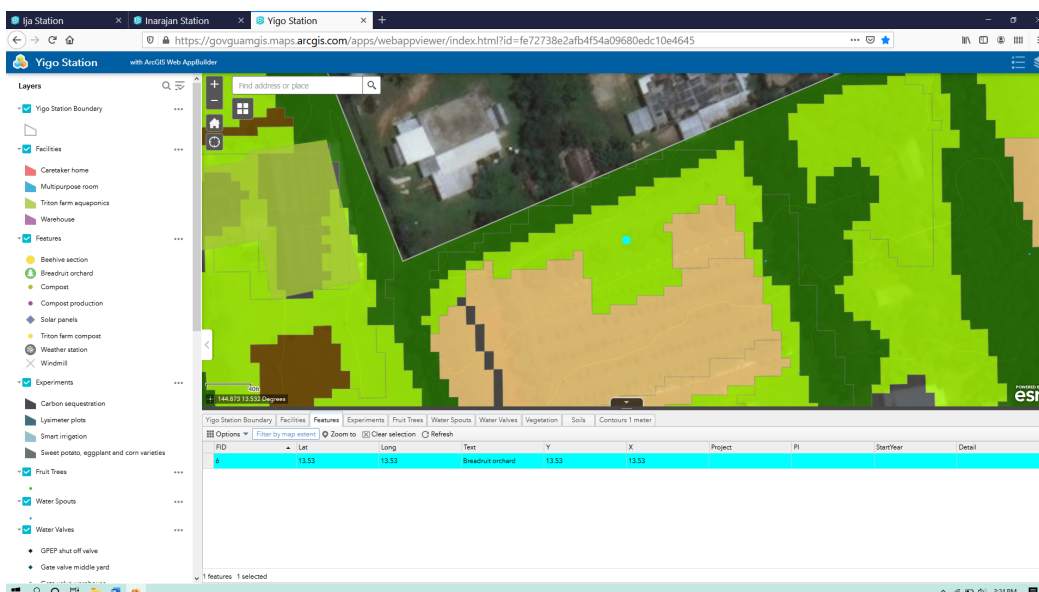
Perhaps you would like to see if there is anything in the imagery that is represented by the breadfruit orchard feature. Turn the 'Vegetation' layer off by clicking on the blue box next to it in the layer column.
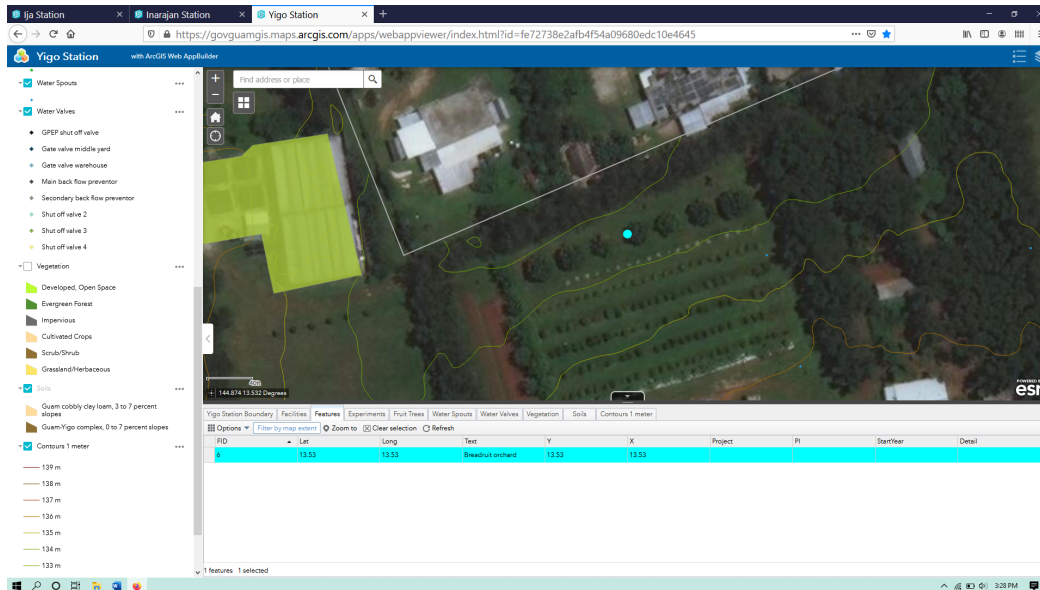
The map should look like this. It looks like there are some trees in a row, which should be the breadfruit orchard. You can turn layers on or off to better view them when they overlap, or you can adjust the transparency. Maybe you want to see how the vegetation layer overlaps with the imagery without turning layers on and off endlessly. Click on the box next to 'Vegetation' to turn it back on.

Change the Transparency of Layers - You can adjust the transparency of any layer by clicking on the three little dots to the right of the layer in the layer tab on the left side of the screen, and then selecting 'Transparency'. When you select 'Transparency' a slider bar will appear which will allow you to slide to the transparency level you choose. At the far left is 0% which means the layer is solid color, and at the far right is 100% which means the layer will be invisible. If you are looking at several to many different layers, it is best to choose a higher transparency with upper layers and a lower transparency with lower layers. This also tends to result in layer color changing.
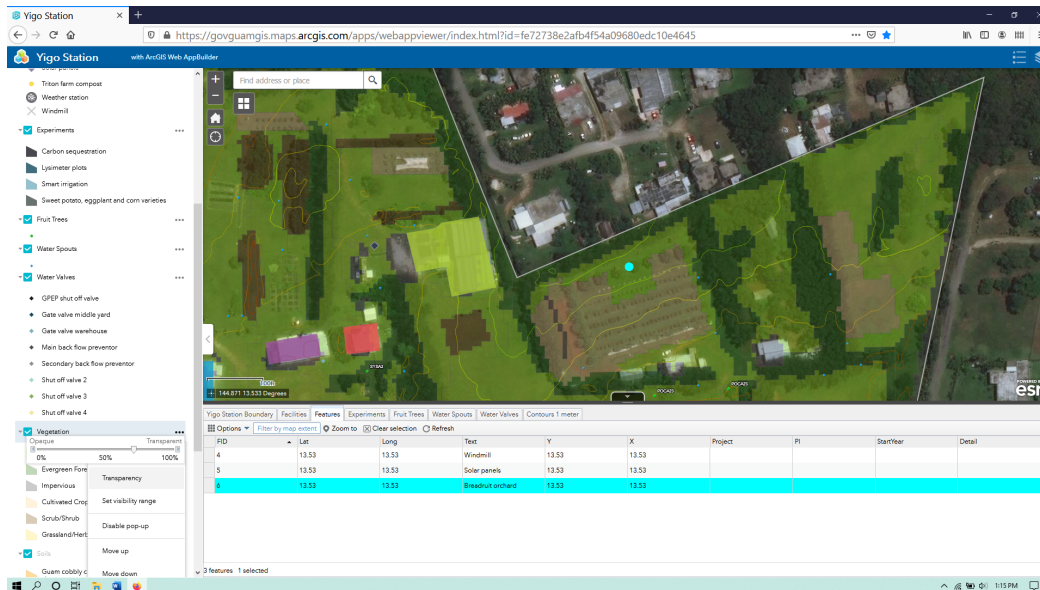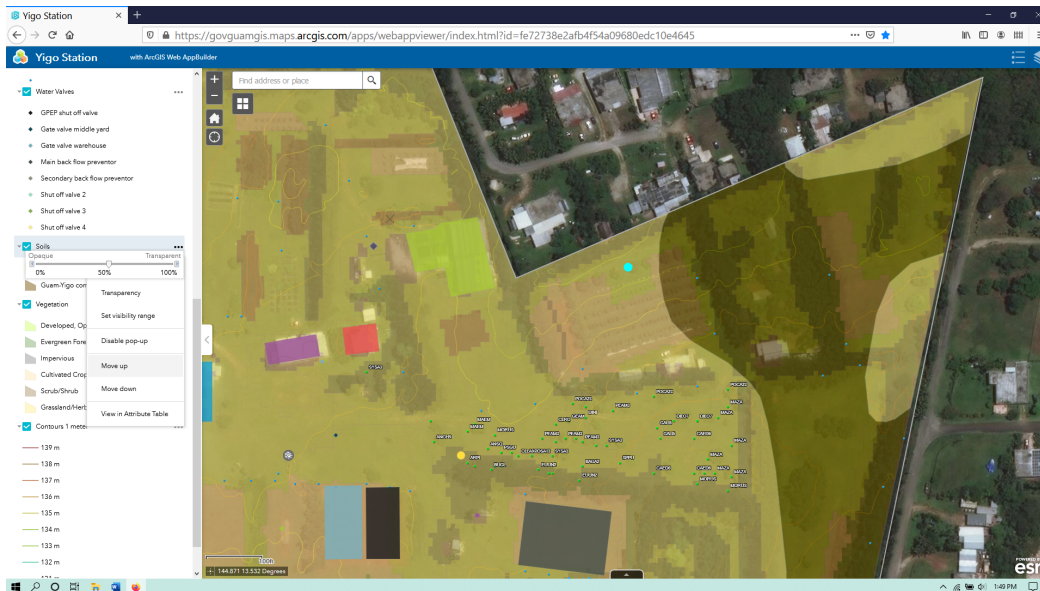
In this case the transparency for 'Vegetation' was set to about 70 %, resulting in lighter colors, and allowing some visibility of the imagery below it. You may have noticed that the 'Soils' layer is turned on but not visible at this scale. If you like you can adjust the visibility range to see it here. First close the attribute table by clicking on the down arrow in the small tab at the top center of the table.

Adjusting Visibility Range – You can adjust the visibility range of any layer by clicking on the three little dots to the right of the layer in the layer tab on the left side of the screen, and then selecting 'Set visibility range'. A slider bar will appear with two adjustable knobs. The one on the left adjusts how far zoomed out you will still see the layer, and the one on the right adjusts how far zoomed in you will see the layer. Click on the three dots next to the 'Soils' layer in the layer tab and select 'Set visibility range.'
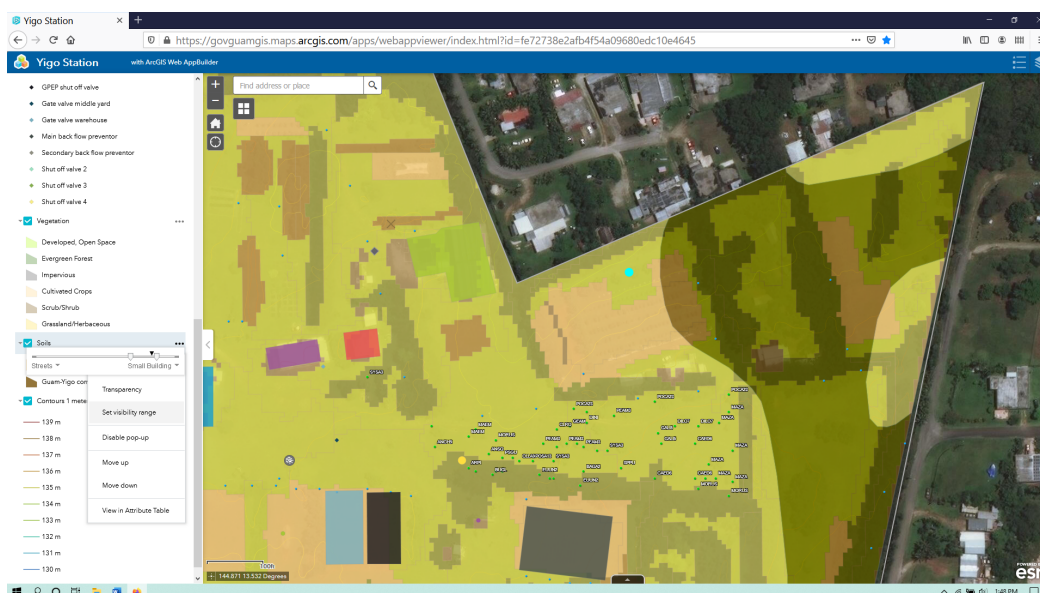

In this case the zoomed in visibility knob was set to 'Small Building', and now you can see the soil layer displayed. Perhaps you would like to see what it looks like to view the soils drawn on top of the vegetation.

Changing Drawing Order of Layers – You can change the drawing order of any layers (or its vertical position in the layer tab) by clicking on the three dots next to it in the layer tab and selecting 'Move up' or Move down.' Click on the three dots next to the 'Soils' layer and select 'Move up.'


In this case the transparency of the 'Soils' layer was also changed to about 60 %, to see the vegetation layer underneath. It does not look much better than when it was below the 'Vegetation' layer so click the three dots next to the 'Soils' layer and select 'Move down.'
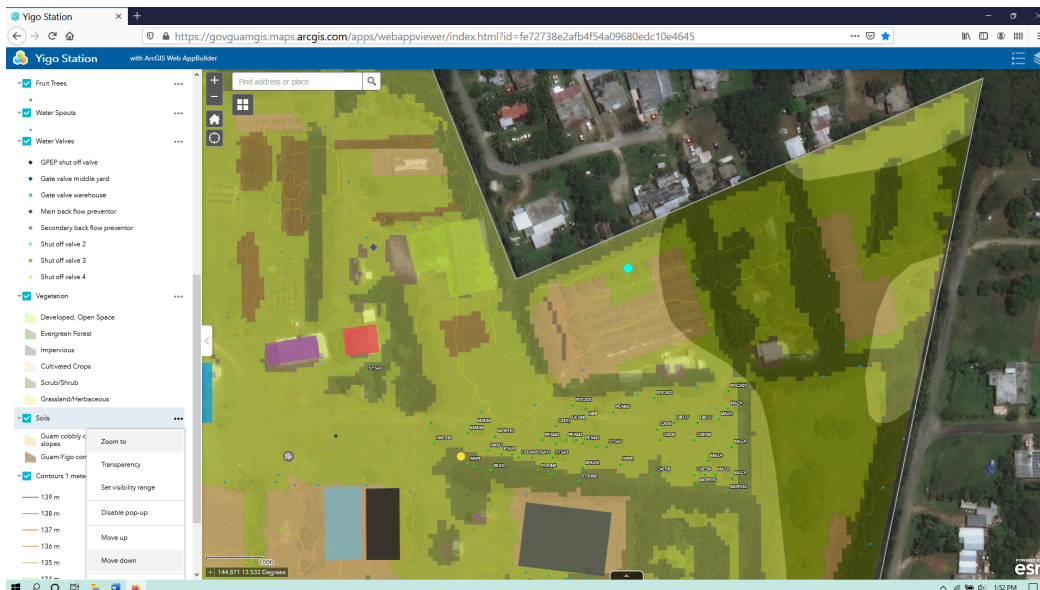
Now you are back at the same drawing order but with the transparencies of both the vegetation and soil layers and the visibility range of the soil layer adjusted. Perhaps you noticed some of the facilities to the west of the breadfruit orchard, and you would like to see them more clearly.

Zoom to Feature From Layer Tab – You can zoom to any feature from the layer tab by clicking on the three dots next to it and selecting 'Zoom to.' Click on the three dots next to 'Facilities' and select 'Zoom to.'
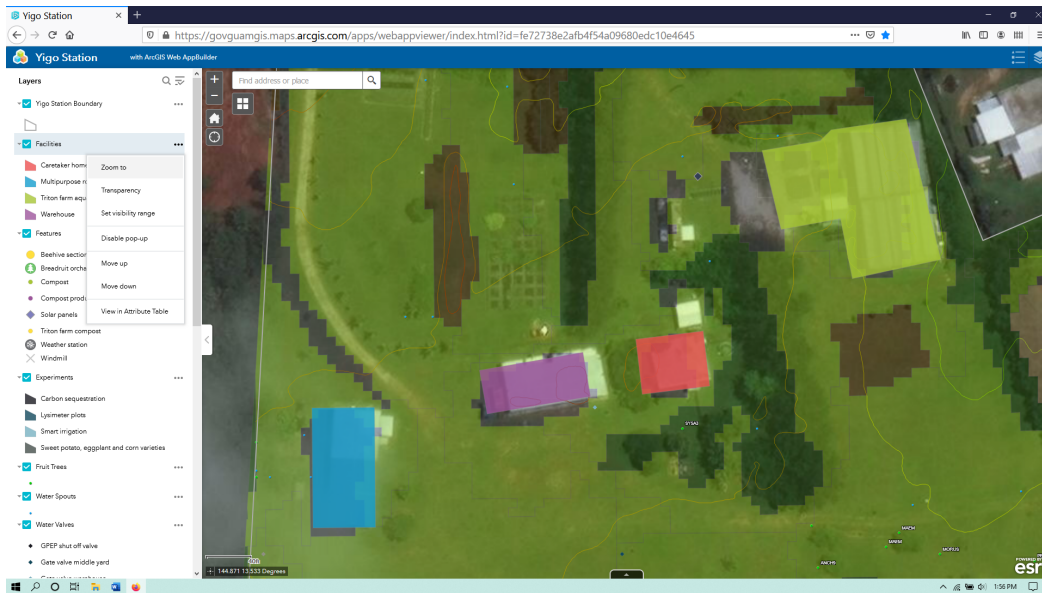
If you want to go back to the beginning without changing back everything you may have changed, you can always close the window and revisit the website app. If you close the app and quickly open it again, there will be a little box in the bottom right corner called App State, which if you click it will restore your previous view of the app, but it will not restore your changes to transparency, visibility range, or drawing order.